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ABSTRACT

We are witnessing an historic shift in our approach to employment policy that will have profound implications for vocational educators. This shift is most recognizable in the waning influence of demand-side economics and the ascendence of supply-side economics. Recent indications are that public policy is no longer firmly committed to maintaining full employment. The principles of Keynesian or demand-side economics (which assert an inverse relationship between unemployment and inflation) no longer seem valid in light of recent economic and political developments. Demand-side policies were built on the idea that the American economy was mature and has used its capacity for growth. In reality, America is on the edge of a technological revolution. Nevertheless, despite an abundance of work that needs doing, a shortage of jobs exists. Thus the need for entrepreneurship training is greater than ever. Recent studies and interest in small business seminars affirm this need. Studies on entrepreneurship education and its effectiveness are needed. In addition, the terms of employment must be redefined. (A series of questions and answers follows the text.) (MN)

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Occasional Paper No. 70

WORK, EMPLOYMENT, AND THE NEW ECONOMICS

by

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FOREWORD

"Work, Employment, and the New Economics" is the topic of Dr. Marvin Feldman's presentation to the National Center for Research in Vocational Education. Dr. Feldman is currently the president of the Fashion Institute of Technology in New York City and prior to that, served as chairman and executive director of the Planning and Review Committee in the U.S. Office of Economic Opportunity in Washington, D.C.

Dr. Feldman has served as a consultant to the U.S. Commissioner of Education, a program officer for the Ford Foundation, and as vice-president of Cogswell Polytechnic College in San Francisco.

In his presentation Dr. Feldman offers thought provoking concepts and predictions concerning the methods used to prepare people for vocations. He states "We must stop preparing students for jobs and begin preparing students for work."

Dr. Feldman sees entrepreneurism as a vital and inevitable consequence of the "new economics." He states that the giant corporations, which we would expect to be providing the majority of jobs, are more a result of economic growth than its cause. Studies show that while sales of many of the nation's largest companies grow at great rates, they only create a fraction of the new jobs each year as compared to smaller companies. "Something like 88 percent of all new jobs in America in the last five years were created by companies with twenty employees or less," says Dr. Feldman. Clearly, entrepreneurship is the rational way of the future in America.

Dr. Feldman graduated from the United States Military Academy, West Point, New York, and is also a commissioned admiral in the Texas Navy. He received an A.B. in mathematics from San Francisco State College and an honorary Doctor of Science in Education degree from Northeastern University, Boston, Massachusetts.

It is with great pleasure that The Ohio State University and the National Center for Research in Vocational Education welcome Dr. Marvin Feldman to share his presentation, "Work, Employment, and the New Economics."

Robert E. Taylor
Executive Director
The National Center for
Research in Vocational
Education

WORK, EMPLOYMENT, AND THE NEW ECONOMICS

I believe that we are witnessing an historic shift in our approach to employment policy, and that this shift will have profound implications for vocational educators. This shift is most recognizable in the waning of influence of demand-side economics and the ascendance of an alternative called supply-side economics.

Since the Great Depression almost exactly a half a century ago, a commitment to maintain full employment has been the centerpiece of public policy. I do not think that is going to change. However, the method for meeting this commitment has been the management of overall economic demand according to the teachings of an infant science created for the purpose called *macroeconomics.* That, I think, is going to change radically.

On August 24, 1980 the Joint Economic Committee of Congress issued a statement that marked the end of an era of public policy. The report said bluntly that the American economy cannot be "fine-tuned" anymore. It reviewed six recessions since World War II, and then concluded that the government's attempts to shorten the duration or reduce the intensity of recessions through countercyclical programs have been ineffective. The report was endorsed almost unanimously by the Committee. All eight of the Republican members, and eleven of the twelve Democrats approved it.

This was an immense and sudden change. Just four years before the issuance of that report, the Committee had reflected the economic orthodoxy that had set the direction of public policy since 1946. It expressed full confidence that the economy could be managed, and reproached the Ford administration for doubting it.

"Administration officials," the Committee had said, "speak as though they had heard nothing of the progress in the past forty years of the highly developed economics discipline," in an evident reference to the publication of John Maynard Keynes' *General Theory* in 1936. It sternly admonished the administration to stop purveying ignorance. Now, the Committee has almost unanimously repudiated these forty years of progress. What was reprehensible ignorance four years ago has suddenly become the new economic wisdom. The renunciation of the Keynesian gospel had become commonplace for a very simple reason. The central proposition of the Keynesian model was that unemployment and inflation had a very neat inverse relationship to each other, like the ends of a seesaw. If unemployment went up, inflation would go down, and vice versa. This relationship was so fixed and predictable that, if charted, it produced a clean line called the Phillips Curve, and thus it was a marvelous policy instrument. For years this soothing assumption was integral to public policy.

Then in the seventies, things began to change. We began to have inflation and stagnation at the same time. It was called "stagflation," and the Keynesian edifice began to crumble. "The Keynesian conceptualization is being torn to shreds," wrote a labor economist. Paul Samuelson, who beyond any doubt had been most responsible for the apotheosis of Keynesian economic theory in the forties, said sheepishly that "experts feel less sure of their expertise." England's *New Statesman* put the matter flatly. "An economist," it said, "is an inhabitant of cloud cuckoo land, knowledgeable in an obsolete art." James Callaghan, the British Labor Party's Prime Minister, said with a clarity rare in politics: "We used to think you could spend your way out of a recession and reduce unemployment by cutting taxes and boosting government spending . . . That option no longer exists . . . It only worked by injecting bigger and bigger doses of inflation into the economy followed by higher levels of unemployment as the next step. That is the history of the last twenty years." Charles Schultze, chairman of President Johnson's Council of Economic Advisors, echoed that conclusion precisely. "Every time we push the rate of unemployment toward acceptable low levels, by whatever means," he said, "we set off a new inflation. In turn, both the political and economic consequences of inflation make it impossible to achieve full employment."

Now, American voters have expressed themselves emphatically by electing a president who promises supply-side economic policy, by purging the whole class of liberal demand-side senators, and by electing a Republican majority to the Senate for the first time in a quarter of a century. Clearly, we have come to the end of an era. Events had already dictated the change. The election was merely the punctuation.

It all began almost fifty years ago when, on what we call Black Thursday, the bottom fell out of the American economy. The Crash was not a single shock, but a crushing series of shocks. The first sickening slide, Black Thursday, was October 24, 1929. Then came Black Tuesday, and , for a while, despair was rampant among investors. Some cried uncontrollably. Others kicked the ticker tape machines. A few, although not as many as legend suggests, went to the roof and jumped. The collapse of the stock market was just the beginning. A year later *Business Week* was still saying, hopefully, that business was only in a mild recession, but in time it was clear to everyone that something dreadful had happened to the American economy. Looking back, the bottom of the Depression, when we finally reached it, was terrifying. The Gross National Product had fallen by half; nearly half of the nation's factories had shut down; Big Board stocks had lost four-fifths of their value; 5,000 banks had closed their doors; 15 million people had lost their jobs; a million families had lost their homes; 18 million Americans were on relief.

The Great Depression (I am old enough to remember it with a child's vivid view) was a national mortification. Men rode the subways all night to keep warm; people put IOUs in church collection plates; Illinois Wesleyan University accepted vegetables for tuition; once prosperous professionals shuffled from door to door selling shoe polish and fly paper; college graduates sold apples on the streets, wearing their caps and gowns.

For the first time in our history, more people left the United States than entered it. The Russians advertised for 6,000 skilled workers, and 100,000 Americans applied. More and more, Americans began to believe that the moment working people had dreaded since the earliest beginnings of industrialization had come at last. There seemed to be an elemental, universal anxiety, a fear that we had produced too much, too fast.

This fear shows itself, in one form or another, in many cultures. Among the Columbian Indians, if one worker is faster than the rest, this individual's work place is marked by a cross, and at the job the next morning the co-workers pray that the worker will be tired and slow.

In the thirties, many Americans believed that the world's work was done. This recession was not like the others, from which, sooner or later, we moved on to even higher levels of productivity. This was the end of the line—an awful fulfillment of a collective premonition that the machine was the enemy of working people. It had lured them away from the land and then, when the work was finished, when the last car anyone wanted was assembled, when the last house had been built, and the last washboard had come off the assembly line, it left them to starve. The work was done, or so it seemed, and the people who had burned their bridges and left their land behind were terrified. It was part of the abundant mythology of that time that America, if not the whole industrial world, was close to revolution in those dark times. However, scholars who have studied unemployed people carefully find that unemployment, far from galvanizing working people, reduces them to a very frightened impotence. Columbia historian John Garraty writes that jobless protests were "sporadic, unfocused, and merely rhetorical." A reporter described the 1932 bonus marchers, who camped in Washington pressing for a veterans' bonus, as "the army of bewilderment, behaving with a curious melancholy." Another reporter, after seven months of driving across the country, expressed outrage at the unemployed workers' passive acceptance of their condition. A sociologist called the unemployed he studied "scattered, loose, perplexed, and hopeless—a mass numerically, but not socially." Three times as many American workers voted for the Communist presidential candidate in 1912 as in 1932. We were, capitalists and workers alike, above all, desperately afraid.

Franklin Roosevelt was merely expressing the conventional barbershop wisdom of the time when he told an audience of businessmen in 1932 that America's great era of growth, which had exploded after the Civil War, was over. "Our task now," Roosevelt said, "is not the discovery or exploitation of natural resources, or producing more goods; it is the soberer, less dramatic business of administering resources and plants already at hand." More growth, he explained, could be dangerous. The American economy, which in fifty years had lifted a whole nation of refugees from poverty, had finally reached the unforgiving winter of its maturity. "We had," he said, "produced too much too fast." Now the problem was a strange new economic phenomenon called "underconsumption." A few weeks later Roosevelt was elected to the presidency, and what he had told that business audience became the basis for nearly a half a century of public policy. It marked the beginning of an era of demand-side economics and became the declaration of a war on production that would last for over fifty years. The problem was, or seemed to be, that the economy was producing more than the people could afford to buy. "The cure," the president said bluntly, "is not to produce so much." So the first stage of the homespun struggle against production began—bizarre only because it was so innocently direct and literal.

When the price of crude oil fell to ten cents a barrel, Oklahoma's Governor "Alfalfa Bill" Murray sent troops to stop oil production. The federal government paid farmers to plow crops under and kill new litters of pigs. Almost from the beginning, there was a tremendous pressure for government spending to get the economy moving. According to Dorfman's standard history of the period, few knowledgeable persons, including economists, doubted that public works expenditures would have to be extended and that deficit spending would continue. "We saved our way into the Depression," wrote one business economist with impeccable conservative credentials, "we must squander our way out of it." A group of "scientific economists" assembled by William Randolph Hearst to support a proposed $5 billion program of public works said that most economists had been pushing for ten years the idea of public spending in depressions to restore purchasing power. However, Roosevelt, interestingly enough, resisted deficit spending. He thought the economy was suffering from an elusive "structural defect," and that pump priming could at best be a stopgap measure until that defect was found and corrected. He was, at the very beginning at least, much more interested in programs like the National Recovery Act, which sought to adjust production more accurately to demand, than he was in public works and government spending. Government spending was for relief.

Keynes and Roosevelt met very early in the latter's administration, but neither was much impressed by the other. Roosevelt said he could not make sense of what Keynes said to him, and Keynes expressed polite surprise at Roosevelt's limited economic knowledge. However, it was Keynes, who, in the end, probably had the greatest influence on the country's economic thinking. He published his *General Theory of Employment, Interest, and Money* in 1936, and it was eagerly received by a waiting world. A group of impatient Harvard students pooled their money and ordered copies directly from the British publisher. The book, surely the most controversial and influential of our time, caused a revolution in economic theory, and shortly thereafter, in public policy. Keynes' severest critics called the book a masterpiece. It was, like most great works, the elaboration of a vision, and the Keynesian vision, as Joseph Schumpeter has pointed out, was the vision of a world run down, in which the spirit of enterprise was flagging, investment opportunities drying up, and in which saving had thus lost its usefulness and become a problem. The Keynesian vision saw society, in short, as "baking cakes in order not to eat them."

I do not intend to recapitulate the complex propositions of Keynes' *General Theory,* merely to summarize them in a sentence or two and get on to the issues of vocational education. The Keynesian diagnosis is that an industrial economy can come to rest with less than all its resources employed because there is a tendency for savings to exceed investment opportunities. A free economy does not, as classical economics contends, lead toward providing full employment—quite the reverse. This stagnation and the mass unemployment that was its cruel, intolerable consequence could be remedied by appropriate—if necessary, massive—doses of public spending.

The validity of Keynesian doctrine seemed to be unmistakably confirmed, not by the New Deal—that experience was equivocal—but by mobilization for war. This was the only time it ever worked. Unemployment stood at 16.7 percent when the Hitler-Stalin Pact was signed in August 1939. A few months later, unemployment had disappeared like magic. Federal spending jumped from $9 billion in 1939 to $100 billion in 1945. In 1941, the federal deficit was about $5 billion; two years later it was $55 billion. The economy, so recently pronounced senile, was booming. As one Keynesian wrote later, "the huge federal deficit generated by massive military expenditure produced precisely the consequences anticipated by the Keynesians. What counted was the spending. A society sensible enough to purchase decent health care, public transportation, public libraries, and inexpensive shelter could also enjoy the delights of full employment." The Keynesian therapy was promptly built into the Employment Act of 1946. The government committed itself to maintaining full employment, confident that the means were now at hand. It became the most costly government undertaking in the history of the world, including the Pyramids, and China's Great Wall.

Unemployment was the central problem of industrial society, and the government's task was to remedy it. The best approach was macroeconomic—the creation of employment on a grand scale by stirring up the whole economy, by stimulating consumption. Production would take care of itself; it would tend to follow automatically if demands were kept strong. We no longer killed livestock, or set corn fields on fire, or sent troops to stop oil production. Our active antagonism toward production had cooled. But, an official indifference to the need to maintain and expand productive capacity was built into public policy.

By 1960, the acceptance of Keynes was nearly universal. "We are all Keynesians now," somebody said. If the economic waters receded or left some stranded on high ground, macroeconomics meant flooding the whole landscape, raising the whole level, and setting those people afloat again. There was a powerful tendency to let the microeconomic details take care of themselves. It was an era of overpowering emphasis on demand-side economic stimulation of

consumption. Policy approaches that emphasized the supply side, those concerned directly with production, capital formation, and vocational education, were consigned to the shadows. What gave extra appeal to Keynesian analysis was its repudiation of the role of saving. The resentment of capitalism's inequality suddenly had a powerful rationalization.

Classical economics had taught that economic progress depended on saving and that the rich, who saved the most, were most necessary to progress. Keynes stood this proposition on it's head. Saving was not only not necessary; it was the principal cause of unemployment. "Prosperity," he wrote, "far from being dependent on the abstinence of the rich, is more likely to be impeded by it." Elsewhere, he wrote more bluntly that "the unequal distribution of income is the ultimate cause of unemployment." Rather suddenly, the public policies of a country that had become the cradle of capitalism became indifferent to the need for capital formation, if not hostile to it.

Almost three decades later, the Keynesian honeymoon was over. The Joint Economic Committee had made it official with only one dissenting vote. The voters seemed to agree, electing the first supply-side majority to the Senate in postwar history. What now? What does this mean for us? It seems to me that if the details are obscure, the general outlines of the next era of economic policy are already clear, and it is not going to make any difference if four years from now we elect a Democratic president or a Republic president. It will be an era of reemphasis on the supply side of economics. It will be an era guided by the kind of economics that says what is good for General Motors, and all of the other individual enterprises born and unborn, is good for the country. It will be an era that reemphasizes capital formation. It will be an era that reemphasizes productivity. It will be an era in which the new slogans will be revitalization, reindustrialization, and recapitalization.

Most importantly for this audience, it is going to be an era of reaffirmation of the centrality of effective vocational education as a primary answer to the unemployment problem. Vocational education is the educational component of the supply-side approach to full employment. The Joint Economic Committee recommended a new emphasis on vocational education. Alfred Malabre, the widely read *Wall Street Journal* columnist, in his most recent book, calls for vocational education as the way "to bring down joblessness with a minimum of inflationary pressure." For half a century, public policymakers wanted to know what to do about unemployment. They called on Harvard's macroeconomists to give them the answers. They were interested in broad, overall, systematic macroapproaches; they were interested in monetary and fiscal policy; they were interested in large economic variables such as M-1A and M-1B, the controversial measures of total money supply.

Unemployment was the central problem, but for thirty years no one sought the counsel of vocational educators. Policymakers were not interested in capital formation. They were comparatively indifferent to enterprise. It was a period of belief in capital punishment, benign indifference to productivity, and a kind of a bored tolerance of vocational education. We have known for twenty-five years what creates jobs in America: it is the formation of small businesses, the promotion of entrepreneurs, self-employment, increased productivity through increasingly effective vocational education.

Now all that is changing. Unemployment is still the central problem; it always will be in a specialized economy. In my opinion, the results of the 1980 presidential election had more to do with the closing of the Ford Plant in Rahway, New Jersey, than with the hostages in Iran, or all of the other issues that are on the front pages of the daily news. There is a basic fear in America that there are not enough jobs to go around; a belief that there is work to be done, but not enough people in jobs to accomplish it. As we tinker with this belief, we will see vast changes in politics.

Despite all this, it is going to be an interesting era. The demand-side medicine has been found to have very dangerous side effects. It has been pronounced hazardous to our economic health. Now, policymakers will be looking in new directions for supply-side policy initiatives. They are going to be looking to vocational education. I hope we are ready.

The beginning of our preparation must be to obtain a fuller understanding of what vocational education means in a postindustrial society. Our mission as vocational educators is being elementally altered. We must still teach skills, but we are going to have to teach skills of a different and somewhat unfamiliar order. We have to go far beyond Prosser, who believed in the precise preparation for specific job slots requested by industry. I do not think Prosser is going to be our hero in the decade ahead. We have to reread John Dewey, that unread and misunderstood genius of educational theory, who wrote that "a proper conception of industrial education would prize freedom more than docility, initiative more than automatic skill, and insight and understanding more than the capacity to recite lessons or execute tasks under the direction of others." Dewey was suggesting that we prepare young people to be self-employable, either on their own or inside organizations—that we prepare them for work rather than for Prosser's precisely prescribed jobs. That battle between Dewey and Prosser has been going on for years and years. But now suddenly it has a new urgency. New demands and unfamiliar demands are going to be made on the vocational system.

We can find the character of these new demands in the full recognition that it was not just Keynesian policy that was wrong; the whole Keynesian premise was wrong; the Keynesian vision was wrong. We have been so preoccupied with the application of demand-side economics and policies that we have forgotten to reexamine the social diagnosis on which they were based. Demand-side policies were built on the idea that the American economy was mature, that it had used up its frontiers; and its capacity for growth, as Roosevelt put it, was nearly over. That mournful assessment, painfully plausible in the thirties, was clearly mistaken then, and is mistaken now.

Since then, we have moved through several completely new generations of technology. Now we are on the edge of a technological revolution so vast in its possibilities, that futurist Al Toffler calls it "the third wave." Nevertheless, the idea that job opportunities are dwindling, that people wanting work are a problem rather than an opportunity for progress, has worked its way deep into the collective subconscious. We have thus tended to see the unemployment question as one of rationing a limited resource rather than releasing a limitless one.

That is the central anomaly of industrial America: there is plenty of work to do in America but there are not enough jobs. Of course there is plenty of work to do. There are plenty of people who want better houses and better clothes. There are plenty of people who want to get on with the rebuilding of our decaying urban centers. More discriminating consumers want better products of better quality. There is much to be accomplished in terms of recycling our nation's resources on a regular basis. This alone is a most exciting possibility for creating jobs in America. By converting industrial processes to reuse waste materials, we will realize half a dozen important ambitions all at once: we can protect the environment and produce products of better quality that take less energy to make. As a bonus, we can improve the balance of payments by reducing imports of raw materials.

There is a staggering agenda of work that needs doing, but a nagging shortage of jobs. This may be because the macroeconomic view of society, along with other misconceptions, saw the work force as some great, inert, shapeless mass, an industrial proletariat, which somehow had to be fully employed. The supply-side policy revolution suggests an altogether different view. It suggests that we have had a half century of misfocus. It suggests that we must begin to prepare young people for work that will always be abundant, and not for jobs that will always be scarce.

Almost accidentally, my institution found that it is preparing young people to create their own work. We have 10,000 students at the Fashion Institute of Technology (FIT) in sixteen different majors. We have our stars, the Calvin Kleins and John Anthonys and Antonios in each of the majors, but we have discovered in study after study that many of our graduates open small businesses—become self-employed. Every time they do, they create more jobs. We must recognize this growing phenomenon in vocational education.

Recently at FIT, we announced a one-day seminar in the newspapers. The advertisement said that on November 15, sixty of the smartest women in the fashion industry would attempt to give 850 women a piece of their mind. We had to return 1,300 checks; we turned away 1,700 people because our theater only holds 800. There is a demand out there that is simply not being met.

What we are finding at FIT is that we have equipped our students not to find jobs, but to find work. We place 96 percent of the students of every graduating class. A growing number are employing themselves. This small distinction between preparing for self-employment and preparing for a job has immense consequences. Graduates who are educated to be self-employed are the ones who create jobs for others. This is precisely the metabolism of economic growth.

The economy grows as new businesses are formed. Big businesses are less a cause of economic growth than one of growth's results. Small businesses are the principal sources of new ideas, of new economic growth, of new work opportunities. A few years ago, in a simple study that became a landmark, the M.I.T. Development Foundation compared job formation in sixteen companies over a five-year period. Six of the companies were seasoned giants with sales in the billions. Five were fairly large companies with reputations for innovation. Five were smaller, new companies built on new technologies. The sales of the six largest companies, such as Bethlehem Steel and General Electric, grew at about 11.4 percent a year, but their employment rolls increased at the rate of only .6 percent a year, and they created only 25,000 new jobs. The sales of the five large innovative companies, such as 3M and Xerox, increased at about 13.2 percent a year. Their employment rolls increased at the rate of 4.3 percent a year. These five companies created 106,000 new jobs. The sales of the five small companies, such as General Data and Computer Graphics, increased at about 42 percent a year. Their employment rolls increased at a rate of 41 percent a year. Their sales totaled less than a thirtieth of the sales of the six giant corporations, but they created 10,000 more jobs than the giant corporations, or about 35,000 jobs altogether.

Another study showed that something like 88 percent of all new jobs in America in the last five years were created by companies with twenty employees or less. An astounding 70 percent of these companies were less than five years old.

We need something like a national rediscovery of the indispensable role of entrepreneurs. They have become an endangered species. I lost a job in California because the system considered me an educational entrepreneur, and I used to hang my head in shame. Now it is becoming a respectable label. Studies suggest that entrepreneurs tend to be poor performers in school. Many entrepreneurs have been school dropouts. This could mean that the conventional educational programs are neglecting the nurture of the imagination. The Marxists have accused vocational educators of creating the personality and cognitive traits that enable individuals to function effectively in bureaucratic work organizations. Maybe they are right. Maybe we have been training and taming people instead of inspiring them. That suggests another frontier, the larger task of making work within organizations more entrepreneurial.

FIT just finished a contract with a major department store chain for a buyer retraining program to help create entrepreneurial conclaves inside the larger corporate world. This is just the beginning of a new way for stores to organize so that employees can control the management and operation of subunits within the larger corporation—in other words, to behave entrepreneurially.

Let me quote a paragraph or two from an unusual article by Norman Macrae, the iconoclastic deputy editor of the *London Economist*. He believes that more entrepreneurial corporate forms are the wave of the future. Macrae points out that since the turn of the century, 40 of the world's 159 nations have grown rich because they were able, temporarily, to increase productivity through a top-down order from executives who determined the work motions of assembly line workers. However, this era, he claims, is over. "Educated workers do not like to be organized from the top," he writes, "and much of manufacturing, and most of simple white-collar tasks can be gradually automated, so that more workers can become brainworkers." Imagination, he points out, is a human quality that cannot so readily be organized from the top down. He believes that many operations that have been run by some disciplined process will need to be made much more entrepreneurial.

There is another optimistic vision of the future of working people. What technology is going to give us, what Toffler's "third wave" is going to give us, is the demassification of the work force. It is going to mean a change in how working people are perceived. No longer will they be interchangeable digits belonging to a great gray mass that the microeconomists call the work force. Instead, workers will be increasingly autonomous, self-supervising individuals who look forward to a rich and intensive life after work. Higher education is going to have to remember this, and institute drastic change in recognition of it.

Higher education, until quite recently, was frankly elitist. Before the American Revolution, Harvard students were listed by social rank when they first entered the school. In those days, common people, defined as those without a college education, were flatly forbidden to "walk in great boots" or otherwise imitate the behavior of their betters. It was a rigidly hierarchical society. Colleges educated the tiny elite destined for the ministry, for the professions, or for the easy responsibilities of the ruling class. The education provided was essentially a liberal arts education. One learned skills in other ways. As the great democratic tradition blossomed in the United States—and it blossomed here as it had nowhere else in the world before—more and more people aspired to more and more education. The model was this same liberal arts education intended for an aristocratic minority (most of whom had no need to earn a living), or for the professional scholar. "Do you smoke?" the great lady asks her daughter's suitor in the Oscar Wilde play. "Good!" she replies, when he admits hesitantly that he does, "I think every young man should have an occupation of some kind." In 1900, about 200,000 students went to college. Last year the figure was over 11 million.

However, the vocationally impractical curriculum simply did not suit the needs of the new masses. So, somewhere along the line, liberal educators began to make an uneasy, tormented case for the relevance of irrelevant education. The consequences have been disastrous for the great liberal tradition of education and for millions of students who have been seduced into believing that liberal education has a vocational relevance which it simply does not, cannot, and should not have. At FIT we recognize that. One-third of our curriculum is liberal arts, and I will fire any teacher who makes it "related." There is no such thing as related economics, related sociology, or related math. The liberal arts have no vocational relevance; they have a vast importance of their own. Now, as a secondary consequence, this culturally indispensable liberal tradition is being discredited because in practice it fails to do what it should never have been represented as doing in the first place. We vocational educators are witnessing an unwelcome reaction against liberal education. The situation has grotesque consequences.

We read in the papers that thousands of young people are "overeducated." How can a civilized person know too much? How can an individual who has struggled for centuries for the leisure that will provide freedom from the exhausting struggle for survival—for some time for rest and contemplation—how can that person be overcivilized? This assumption is absurd! Students can know more than they need to know to program a computer or to work in a supermarket, but can one know so much as to be "overeducated?" To me, as an educator, it is an obscenity to assume that someone could be overeducated. Clearly the rehabilitation of vocational education to include liberal arts and adapt them to the needs of a mass aristocracy has become an urgent necessity. The paradox is that only vocational educators can lay out the real case for liberal arts. We do not have to pretend that they are vocationally relevant. We can say, more forcibly than the liberal educators, that liberal arts are vocationally irrelevant, but that they have a desperate importance of their own.

We have historically divided the arts to which we educate people into three separate domains: the practical arts, the liberal arts, and the fine arts.

All three are, in their way, liberating. All of them free us from enslaving limitations. All of them enlarge us, although in different ways.

The practical arts are the arts of function. Their mastery provides independence from degrading toil. Their conscientious pursuit has enduring, intrinsic value.

The liberal arts are the arts of meaning. Their mastery provides a sense of purpose, of relationship, of order. They free us from the anxiety of alienation. They help us know the full range of human possibilities, and guide our restless efforts to perfect our institutions.

The fine arts are the arts of transcendence. Their mastery provides a sense of depth, of mystery and majesty. They remind us that we can create more than we can comprehend. They free us from the anxiety of limitation.

Lately, I have been haunted by a puzzling, perplexing, heartrending book called *What Went Wrong?* by an English craftsman. He writes about British working people who have largely achieved all of the material goals they sought half a century ago, and who now have no sure sense of purpose. They are asking, with a terrible urgency, whether there can be life after work, or only an emptiness to be filled by passive entertainments, recreational chemicals, and a bored and heavy indolence. In other words, we may be finding that the unemployment problem has two related dimensions. Not only have we left some people wholly unemployed, but we have left unemployed the most human qualities of practically all working people. As we solve the second, less visible problem, the first may simply disappear.

The crisis of macroeconomics may mean that the Jeffersonian ideal, which for two centuries has been stopped at the factory gate, may at last be finding its way indoors. Jefferson's hope that America would remain a nation of independent farmers was more than a sentimental pastoralism. He saw it as necessary to the maintenance of a durable democracy that the participants be financially and psychically independent—not "conditioned by their employment to habits of subordination." Jefferson believed that widespread economic independence through self-employment on the land was the best defense against a familiar tendency for democracies to degenerate into some form of tyranny. In spite of his passion for gadgets, Jefferson was very uneasy about the prospect of industrialization. He shared one historian's concern that it might "blunt people's imaginations and ethical sensibilities."

Now it appears, however, that through transformations in technology, we may simply have taken a long detour to transformations of ideals. We may now be able to achieve that vision—not as a nation of farmers, but as a nation of essentially autonomous, self-supervising, equal entrepreneurs, working within nonauthoritarian conclaves.

What does all this mean for research? I believe that it suggests some new research dimensions. First of all, we need studies of who is doing what, where, and with what apparent result. Education for entrepreneurship is evidently a rapidly growing field. The statistics of nonfarm self-employment began to rise in the seventies after a full century of decline and are still rising. We need to look more closely at qualities like initiative and imagination to learn how our approaches might be altered to nurture them best.

Even more important is the reduction of the emerging vision of a demassified work force to specific active terms. The first step, I believe, is a systematic effort to redefine the terms of employment. We need answers to a whole new set of questions. Macrae says that someday soon we will "pay people for modules of work done." To what extent is employment now being defined this way? In what fields are we paying people that way? What is the effect? Can reasonable comparisons be made? Is the work module method more productive, more cost effective, more satisfying? How can existing, conventional job descriptions be reshaped into work definitions?

Should we begin a continuing conversation with managers, production engineers, and accountants about the opportunities and problems involved as we look at work instead of jobs? What is the state of the art? Is the so-called "responsibility accounting," which pushes the idea of "profit centers" deeper into the organization, a base on which we can build? Can the ideal of "management by objectives," already familiar in the executive suite, be extended to all employees? How might educational programs be modified to prepare people for entrepreneurially defined work? Can a word like "training" be properly applied to the preparation of people who will be self-supervising?

There are some larger questions. How can we redirect human resource training dollars to extend the school day and year, to give students time to make choices, to work together, and to share some common experiences?

Full employment will always be the central domestic concern in a specialized economy. However, as I stand here today, our approach to achieving full employment is changing drastically. Our response as educators is going to have to change just as quickly. The premises of a half a century are being put aside, and a search for a new approach has begun. It is a time of extraordinary opportunity for all of us in vocational education, if we are ready.

QUESTIONS AND ANSWERS

QUESTION: How do you train your students in entrepreneurship?

DR. FELDMAN: This is one of the major problems. Young people today see themselves differently than did my generation. We went to West Point to become generals to achieve recognition and prestige. They see themselves running their own free enterprises to be financially independent. The educational system, higher education in particular, is not fulfilling this vision.

When I arrived at FIT ten years ago, we did a three-year survey of the performance of our graduates, then a five-year survey, and finally a ten-year survey. About four years ago we discovered a sizeable pool of self-employed people among our alumni, so we created a center for self-employment, initially to deal with these people's immediate problems. We helped a number of people create small businesses, particularly minority businesses—without the assistance of the Small Business Administration. Education for self-employment is not enough. There must also be some access to venture capital, analagous, I suppose, to the placement function.

So, we initiated two electives on self-employment in business, and the courses were filled immediately. Then in every major, we included a course on how to sell your services. We place many of our students in jobs, and they go through executive training programs. But at some point, many of them strike out on their own. They may run a little store or a ski shop in Vermont, or they may freelance in pattern making or become production consultants.

Another thing we discovered, particularly from our minority enterprise program, is that entrepreneurship cannot be taught. Business skills and certain management skills can be taught, but not all people are ready to put in the commitment that is required to be an entrepreneur. We need entrepreneurial behavior in the corporate world as badly as we need self-employment for economic growth. Harnessing entrepreneurial behavior in the corporate world requires certain structural changes—profit centers for example—to give entrepreneurial employees a share of the profits they generate.

Many corporations are already moving in that direction, and others have always had profit sharing programs for employees. The self-employed entrepreneurs are a breed apart. They seem to put the business ahead of everything—even family. They get to work at 6:00 in the morning and quit at midnight. They have incredible drive. This is as true in the black community as in the white community. Not all people are entrepreneurs, but there are some in every community. It is important to recognize that. I do not believe you can teach the entrepreneurial instinct, but some research on the topic might help us understand it better. Right now, there are no educational programs to develop this trait more fully. I truly believe that many of today's dropouts, many of our discipline problems, are the result of our failure to engage that entrepreneurial impulse in the third grade or the college. We have just lately recognized its value.

Incidentally, there is a weekend college for entrepreneurs in Tarrytown, New York, run by Robert Schwartz, a self-made millionaire.

QUESTION: I think that your point about the incorporation of humanism is well taken, and that humanism is directly related to the quality of work life and life after work (after 5 p.m. and after retirement) and to the products of work. Based on this, do you see the administration of liberal arts and general education in terms of parallel tracks, or do you have a vision of their being interwoven with vocational education?

DR. FELDMAN: I have a vision. I think we are going to confront the problem of the separation of vocational education and general education when we recognize its cause. The problem is caused by a system that delivers federal dollars through a variety of management systems. As long as that multilayered and ill-defined system exists, we are going to have "turf" issues. In my state, for example, we have a marvelous system of schools. Each of the many technical schools and colleges offers automotive mechanics, fashion buying and merchandising, drafting, and so forth. This is totally redundant. It is happening because of that fragmented delivery system. I believe that sooner or later policymakers will have to face that issue.

We are going to have to realize that we can no longer raise state dollars through incentive programs. Now Washington may put a half billion dollars into vocational education and generate fifteen billion in matching state dollars. But there is a new approach in sight. A state assemblyman recently asked me, "Before you take that federal grant, what is this going to cost the state, Marv?" We in vocational education are going to have to alter our tactics.

We have a certain responsibility in vocational education to educate people as skilled artisans. America's most precious resource has been the technical skills of its people. We have lost our competitive edge in productivity to countries with fewer supporting resources than we have. Reclaiming the skills and productivity of the American people is essential.

For example, what has happened to the trade apprenticeship system in America? At FIT, year after next, we will create our first master's program—not a master's degree program, we already have that, but a master artisans program. We are hoping to reclaim the concept of master craftspeople, of master artisans.

QUESTION: How does organized labor fit into your discussion? It obviously grew during this fifty-year period.

DR. FELDMAN: I met recently with Chick Chaikin, the president of International Ladies Garment Workers Union, who said that we are getting a new breed of corporate executives and labor leaders who have some common perspectives. Both recognize that America's work force must be competitive in international trade. We cannot really deal with this issue on a political basis alone. Because of the devalued dollar, we are finding that it is cheaper to manufacture apparel, textiles, and even shoes in America than in Western Europe or in Japan. Then, on the other hand, we suddenly wake up to the fact that multibillion dollar industries such as the gift ware industry have no work forces. We can manufacture 2 million of almost anything profitably, but 2,000 dozen we cannot manage anymore. We do not have artisanship anymore. Labor leaders are quite willing to discuss this problem.

At FIT we have a model production center. We get all of the latest equipment as it is developed by Union Specialty, Singer, or Food Machinery. We have new adapters and other updating parts. We will run a line for any manufacturer, and show them how to increase productivity. Both labor and management seem willing to learn to produce profitably in smaller quantities. If we don't do it, someone else—the United Kingdom, Germany, Japan—is going to do it instead. I am talking about using the increased effectiveness of more highly skilled master artisans, not forcing less

skilled workers to work harder for the same amount of money. We ought to find another word that avoids the negative connotations of "productivity." People in the AFL-CIO training programs understand this; they understand the need for master artisans.

The hidden problem is that we do not have an effective apprenticeship program anymore. In Pennsylvania there was a Westinghouse Trade School where they taught plumbing. After people went to that plumbing school for four years, they could thread, tap, and perform any other plumbing job. If they got into the union as apprentices, they had to repeat that course as part of their apprenticeship. There was no recognition of that preapprenticeship in qualifying for journeyman status. I wish someone in research would examine the apprenticeship system in the United States, where it is now, where it could be, and how it interfaces with vocational education.

QUESTION: Given what you have said about labor needs and small businesses, could you talk about the transfer of technology across these businesses?

DR. FELDMAN: There is a revolution in the transfer of technology. One of the most profound observations made recently is that because of technology, we can now bring work to the people instead of the people to the work. There is a Chicago bank that is now using computer hookups for home word processing clerks. These clerks may be women who have children and cannot get to the work place, so they are employed on a piecework basis and perform the work at home. The technology allows them to stay home with their children and still hold jobs.

This kind of technological change will breed new relationships. Ten years from now you may find small business persons grouping together to share pension plans and health and retirement systems. They are going to form group policies of their own. There is going to be a radical decentralization of enterprise and millions of tiny new businesses will form.

I do not believe that the associations that speak for industry speak for these new independent, self-employed entrepreneurs. The American Association of Retailers probably does not speak for the little haberdashery in your neighborhood. The American Association of Hotel Restaurant Managers does not speak for the local hash house. I think that there are going to be new organizations and their loud, clear rallying cry will be—freedom through self-employment. When I talk to my own graduates, they know they can, in time, get $50,00 to $75,000 a year at Wornoco or Levi Strauss, but they will settle for $20,000 a year if they know it was earned on their own initiative.

QUESTION: Do you see any evidence that the administration coming into office realizes that vocational education is an answer to the need for skilled labor? If they do not understand this, what can vocational educators do to convince them?

DR. FELDMAN: The American public and most people in vocational education have very little notion of how policies are created. We think that we send to Washington wise people who invent policies, when, in fact, a legislator's vote is a very specialized tool. Policies are made by the people. The race to create public policies is more important than who wins an election. I am deadly serious when I tell you this.

I have a very optimistic view today, not because I know anything about the inner circles of this new administration, or who the administration will select for key positions, or whether they are going to keep the U.S. Department of Education alive. I do not care who might have been elected, Democrat or Republican; the American people have rejected demand-side economics. In 1976 and 1977, there were re-capitalization bills and tax incentive bills being passed. The buzz word was reindustrialization. There is a shift in the mood of the country. The people are

demanding change because their most nagging fear is still that there are not enough jobs to go around. Demand-side economics worked during World War II, but you cannot sustain an economy on deficit spending forever. Now demand-side policies seem to be creating unemployment. The people want a change, and they are going to see it. I have never been so optimistic about the future of vocational education as at this very moment, and not because there is a Republican majority in the Senate and a Republican president. It is because the American people are going to demand a change.

Students are already demanding it. FIT, at a time that was supposed to be a downturn in higher education, turned away 6,000 qualified applicants, and application rates continue to increase at a rate of 25 percent a year. There is not a vocational school I know of in America that does not have a waiting list. In New York City, we turn away 10,000 students from our vocational high schools every year, which means 50,000 people have been denied access to vocational education in the past five years, and many of them become CETA clients on eighteen-month contracts.

QUESTION: There is a need to serve special needs groups to promote equality. How do you think special interest groups are going to respond to a seeming neglect of their needs?

DR. FELDMAN: I do not think that the people who were supposed to be served under policies of equality of opportunity were actually served. There is a cynicism among the underemployed. On the other hand, I find in the corporate board rooms of America a new breed of managers. These are people who have a new vision of America; they have perception and sensitivity. There is an enormous change going on in the corporate world. These leaders are deeper and more literate than my own colleagues in academia. They really understand that in the future, the corporate world of America is going to have to be very involved with broader social issues. The best of them see that the transformation of the employment contract into performance terms is the ultimate expression of nondiscrimination.

The corporate world is moving toward entrepreneurially defined profit centers with new incentive programs and more humanistic management. It will soon become part of the terms of competition. Businesses that don't follow suit will not be in operation by the year 2000. The corporations can be trusted to recognize their economic self-interest, and if they are going to be competitive, they are going to have to create entrepreneur-defined employment with profit centers, with new incentive programs, and with more humanistic ways of dealing with workers as people, not as interconnecting cogs.

QUESTION: You seem satisfied that education, new technology, and entrepreneurship are things that lead to more jobs through small businesses, but the new wave in this country is toward conservatism. This seems to be a contradiction. This group is anti-small business. How do you reconcile these two attitudes?

DR. FELDMAN: If the young people now in colleges and universities who will soon be shaping policy are as interested in self-employment as they think they are (it would be interesting to find out how Ohio State University students envision their life-styles twenty-five years from now), then corporate behavior will have to change. I think the drive toward entrepreneurship is going to force a change in corporate behavior.

Incidentally, it is interesting to note that the competitive sector has no advisory council. They have a profit and loss statement instead. When it is on the loss side, they know they must

change. They change because their economic well-being depends on it. Jesse Jackson taught this concept, and you will find more and more leaders understanding it. Leon Sullivan, at Opportunities Industrialization Centers, is understanding it in terms of the changes he is trying to bring about in some of the corporations of South Africa. All in all, I am more optimistic about change in the corporate world and the acceptance of entrepreneurship than I am of the delivery of services through the government sector.

QUESTION: The main issue of the supply question is that taxes must be cut to allow more spending. So public spending will be cut. I see this as cutting back on vocational education research. I see the priorities being put on energy research, for example, because the industry has problems and needs help. What is your opinion on how research can be applied to the supply question of labor for the economy?

DR. FELDMAN: I believe that there is going to be a redirection of federal dollars, but I believe it will be on the supply side, involving an enormous amount of vocational research. It is going to move from short-term to long-range research. We have to begin the work that must be done: rebuilding of our cities, recycling our resources, and solving our health problems. It is going to require more highly skilled, vocationally educated people. The research will be in the areas I have stressed as important: how do you redefine work to accommodate new employee attitudes, how do you make work more humane, and how do you release the energy of entrepreneurs? I expect a new research emphasis in these areas.

I may be wrong in my predictions. My colleagues all tell me there are difficult years ahead of us. Federal aid will be cut, schools and centers closed. I do not think the American people are going to tolerate this. Instead, I believe we must involve a different breed of economist, sociologist, accountant, manager, or vocational educator on a whole new range of issues.

QUESTION: You have spoken of how education must change to meet the needs of the entrepreneur, but if you look at unemployment rolls, they are made up of people who have little education or training. How do you see vocational education as serving these people?

DR. FELDMAN: We have to recognize that there is friction in our economy at the point where the work that has to get done is translated into jobs. There is a mismatch between the work and the jobs. That is because the whole approach has had a demand orientation. The theory was, if you put money into the economy, everything would adjust itself. The corporate world would find the people and train them, based on the demand. This has not worked.

What I see happening is the development of a new set of objectives: discovering new energy sources, rebuilding our cities, solving our environmental problems. For the first time we will look at the supply side of the labor equation, and see it as an unused resource waiting for a new kind of entrepreneurial leadership. We have to develop support systems for the small businesses that will create the jobs. How do we prepare the work force for those small businesses rather than for General Motors, Bethlehem Steel, or the giant corporate world that increase their profits through overtime work, increased productivity, and automation, but do not increase hiring capacity. We will have to restructure our approach. I worry more in New York City about little stores closing on Madison Avenue than about whether or not United Airlines is going to move to Dallas. We get excited when a new headquarters moves out of New York City that employed 300 people, yet we let little boutiques, which create more work, go bankrupt up and down Madison Avenue. In New York City, thousands of jobs are created by the small businesses while the great corporate giants create only dozens. Yet our whole support system is geared to the large corporation but not to

small business. This insight has profound implications for future curriculum, instruction, and ways of dealing with the unemployed and the so-called economically disadvantaged.

There is a young man in New York City right now who runs a small business called the Guardian Angels. He probably knows more about the training of police workers than the John Jay College of Criminal Justice. We have to unleash such talent and get education programs really geared to train people for that kind of mission.

QUESTION: When you look around the U.S. Department of Commerce and other government agencies, you see that they are funding basic research, not innovative research or research that will help workers, management, and others in using these innovations. What are your suggestions?

DR. FELDMAN: In recent years, the best friend of vocational education, in my opinion, has been the United States Department of Commerce. For example, as fiber optics are developed and new communications systems become available, it will be recognized that the lack of a skilled work force is holding back their implementation. I have had a good dialogue with the Commerce Department on issues of the supply side—human resource needs and the need for particular skills. This recognition may very well translate into dollars for the kind of research we have been discussing.

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